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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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BROWDY AND NEIMARK, P.L.L.C.
624 NINTH STREET, NW
SUITE 300
WASHINGTON DC 20001-5303

EXAMINER

MORAN, M

ART UNIT

PAPER NUMBER

1631
DATE MAILED:

06/14/01

23

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/034,336

Applicant(s)

AGA ET AL.

Examiner

Morjorie Moran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5,10 and 31 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 5,10 and 31 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claims ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☒ Other: *detailed action*.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

All rejections and objections not repeated below are hereby withdrawn.

Claims 5, 10, and 31 are pending.

Claim Objections

Claim 5 is objected to because of the following informalities: the term "and" after "which" in line 8 should be deleted. Appropriate correction is required.

Claim Rejections - 35 USC § 112

Claim 5 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a NEW MATTER rejection.

An inhibitory agent comprising trehalose and cyclodextrin (only) is new, and a method of adding such an inhibitory agent to a fresh plant or edible part thereof is new. Amended claim 5 recites a method wherein an inhibitory agent comprising trehalose and optionally, *either* pullulan or cyclodextrin, to a fresh plant or edible part of a fresh plant. The originally filed claims did not recite pullulan or cyclodextrin. The specification discloses inhibitory agents comprising trehalose and pullulan (p. 28, Example A-4) or comprising trehalose, pullulan, and cyclodextrin (p. 28, Example A-5), but nowhere describes a composition comprising trehalose and cyclodextrin in the absence of pullulan. The specification discloses several examples of adding a composition comprising trehalose and pullulan to fresh plant products (e.g. see p. 29), and discloses addition of trehalose, pullulan, and cyclodextrin to mugwort on page 36. As the

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specification does not teach that the mugwort is dried or otherwise preserved (e.g. pickled or frozen), the examiner interprets the example to be one wherein the composition is added to a fresh plant. The specification does not teach addition of trehalose and cyclodextrin, without pullulan, to any plant product, fresh or not. As neither the originally filed specification or claims teach a composition comprising trehalose and cyclodextrin in the absence of pullulan, a method of using such a composition is new matter and claim 5 is rejected.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5, 10, and 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 recites the phrase "for said inhibition" in lines 11-12. It is unclear if the compounds "for said inhibition" are intended to be only trehalose, trehalose in combination with pullulan or cyclodextrin, or either of pullulan or cyclodextrin alone, therefore the claim is indefinite. This rejection may be overcome by removing the phrase.

Claim 5 recites that an inhibitory agent "contain" (comprise) 20 w/w% trehalose on a dry solid basis. It is unclear what the 20% is relative to; i.e. total weight of the agent, or other "active" components such as pullulan or cyclodextrin, therefore the claim is indefinite.

Claim Rejections - 35 USC § 103

Amended claims 5, 10, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over MARUTA *et al.* (US 5,472,863), as supported by CARDONA (DE 3552309 A1).

Applicant's arguments filed 4/10/01 have been fully considered but they are not persuasive. Applicant argues that none of the prior art teaches a method of inhibiting the decrease of naturally-occurring active-oxygen-eliminating activity by adding a composition comprising trehalose to a *fresh* plant or edible part thereof. In response, the examiner maintains that MARUTA makes obvious a method for stabilizing antioxidants (i.e. inhibiting the decrease of naturally-occurring active-oxygen-eliminating activity) by adding trehalose and pullulan to a plant or edible part thereof, wherein both trehalose and pullulan can be "kneaded" (e.g. homogeneously mixed with plant materials in an aqueous system as previously set forth. In addition, MARUTA teaches that his trehalose composition can be added to beans with water and kneaded (col. 33, lines 34-42). As MARUTA does not teach that his beans are dried or otherwise preserved, the examiner interprets the beans to be "fresh". MARUTA also teaches that his trehalose composition may be added to whole or sliced "fresh radish pickles" (col. 13, lines 26-27), thereby teaching addition of a trehalose composition to a fresh sliced plant edible part in an aqueous system, or may be added to edible wild plant (col. 13, line 40). The examiner therefore maintains that MARUTA and CARDONA make obvious the limitations of claims 5, 10, and 31.

Amended claims 5, 10, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over MARUTA *et al.* (US 5,472,863), as supported by CARDONA (DE 3552309 A1), in view of MANDAI *et al.* (US 5,543,513).

Claim 5 recites a method of inhibiting the decrease of naturally-occurring active-oxygen-eliminating activity by adding a composition comprising trehalose to a *fresh* plant or edible part thereof wherein the composition is homogeneously incorporated into an aqueous system. Claim 5 also recites that the composition may comprise pullulan or cyclodextrin and limits the amount of trehalose in the composition to 20 w/w%. Claim 10 limits the method to further comprise a sterilization and/or drying step. Claim 31 limits the plant of the method to a juicy form.

MARUTA and CARDONA make obvious a method of inhibiting the decrease of naturally-occurring active-oxygen-eliminating activity by adding a composition comprising trehalose to a plant or edible part thereof, and teaches that the amount of trehalose may be 20%, as previously set forth. MARUTA teaches homogeneous mixing of his trehalose composition in an aqueous system, teaches that pullulan may be added to his compositions, and makes obvious addition to “juicy” forms of plants, as previously set forth. MARUTA further teaches and makes obvious addition to fresh plants or edible parts thereof, as set forth above. MARUTA does not teach addition of cyclodextrin with his trehalose.

MANDAI teaches a method of stabilizing food products, pharmaceuticals, etc. during dessication by adding a composition comprising trehalose (col. 2, lines 57-67). MANDAI further teaches that his trehalose can be added to hydrous (i.e. aqueous) food products in liquid or paste form, wherein the food products include fresh fruit and juice (col. 6, lines 20-24). MANDAI also teaches that pullulan or cyclodextrin can be added, and teaches that these stabilizers can be mixed to homogeneity with the trehalose in a hydrous (liquid or paste) composition, before a drying step (col. 7, line 47-col. 8, line 31). MANDAI also teaches that the amount of trehalose added may be 0.01-50 parts by weight (col. 7, lines 34-39).

It would have been obvious to one of ordinary skill in the art at the time of invention to have added the pullulan and/or cyclodextrin of MANDAI in a composition with trehalose to the beans, radishes, and wild plants of MARUTA or to the fresh fruits and juice of MANDAI, in the method of MARUTA and CARDONA, where the motivation would have been to further stabilize the flavor and "effective components" (e.g. antioxidants) of the food products before drying, as taught by MANDAI (col. 7, line 41-col. 8, line 11).

Conclusion

Claims 5, 10, and 31 are rejected; claim 5 is objected to.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

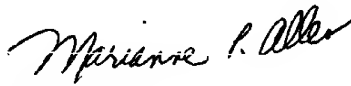
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marjorie A. Moran whose telephone number is (703) 305-2363. The examiner can normally be reached on Monday to Friday, 7:30 am to 4 pm EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward can be reached on (703) 308-4028. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-4556 for regular communications and (703) 308-4556 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3524.


Marjorie A. Moran
June 4, 2001


MARIANNE P. ALLEN
PRIMARY EXAMINER
GROUP 1-303
Au/1631